



New Light on Old Libraries

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NEW LIGHT ON OLD LIBRARIES

DR. GEORG LEYH, director of the Library of the University of Tübingen, has spent much time and energy in investigating the history and evolution of our library buildings. The question as to how to take care of the continuous stream of books pouring from the presses of various countries has commanded the attention of librarians and taxed the ingenuity of architects since the time of Gutenberg's invention.

In the eagerly awaited second volume of Dr. Milkau's *Handbuch der Bibliothekswissenschaft* there is published the most recent of Dr. Leyh's studies on the historical development of the library building and its equipment. He points out that the building with suitable furnishing makes possible the arrangement of the collection, permits convenient usage, prevents scattering of the contents, and assures its continuance. Thus the building becomes an integral part of the library and is of sufficient importance to justify a historical review of its development. The surprising variety in the construction of libraries was brought about by four factors which were developed in a continuous process of evolution: (1) the form of the book; (2) the changing way of using it; (3) the continuously increasing mass of books; and (4) the changes in the architecture and artistic adornment of library buildings.

This chapter in Milkau, together with his previously published articles on "The Evolution of the bookstack" (*Das Büchermagazin in seiner Entwicklung*, Berlin: Elsnerdruck, 1929) and "Library building problems," (*Zentralblatt für Bibliothekswesen*, XLV, 471-503) may for our purposes be considered as parts of a larger study by Dr. Leyh, as reports of work in progress, which some day, let us hope, may be amplified into an independent volume. Studied in connection with Dr. Alfred Hessel's very readable *Geschichte der Bibliotheken* and the illustrations in Dr. Walther Schürmeyer's *Bibliotheksräume aus fünf Jahrhunderten*,¹ they provide some of the historical and pictorial background necessary for an understanding of the evolution of our library buildings. Much more will be available in the course of the year when the third volume of Milkau's *Handbuch* appears.

¹ This should not be read by the serious student without consulting Dr. Leyh's review in the *Zentralblatt für Bibliothekswesen*, XLVI, 506-12.

While we are fairly well informed about the management of libraries in ancient times we know but little about the rooms in which the libraries were kept. Historians have tried in vain to discover the library arrangement which might have served as a model to the Ptolemies. The ancient Egyptian temples had libraries in connection with the archives, which served mainly for liturgical and educational purposes.

The excavations at Nineveh, Pergamum, and Timgad, show merely the position and divisions of the space devoted to the library. The excavations at Ephesus enable us roughly to reconstruct the old library. About all that we know concerning the appointments of the ancient library at Alexandria is contained in the remark of Ammianus Macellinus, who says that nothing could compare with its richness of architecture except the Capitol in Rome.

The public libraries of Rome were usually located in the center of the city and frequently had some connection with a temple. The arrangement of the Pergamum library was followed, the space being divided into three parts: (1) a portico, or place for walking; (2) an ornamental room; and (3) rooms for the storage of the rolls. We know nothing definite about the distribution of the space in the Alexandrian library. All the more valuable, therefore, are the results of the German excavations in Pergamum. Beside the temple of Athena Polias, there was found a free space with a portico two stories high, next to which were four rooms. In the largest of these was a colossal statue of Athena, also pedestal inscriptions of prominent writers of Asia Minor, including one in verse about Homer. This may be considered as the typical library plan of antiquity: the stoa used for studying, a hall adorned with statues, and the rest of the rooms used for storing books, all of this in close connection with a sanctuary.

The library in the Athenian Ptolemaion took on more definitely the semblance of a modern university library. Wide circles of cultured people as a whole were added to the learned patrons. The library acquired its essentially public character and now served, in the words of Vitruvius, *ad communem delectationem*.

"Captive Greece took captive her barbaric conqueror" says Horace. The culture of the Roman Empire is regarded as merely a continuation and further development of Hellenistic culture. From the middle of the second century B.C. Roman generals began to bring home Greek libraries with other booty. Bibliophilism developed in aristocratic Roman society. Cicero greatly valued his collection of books and con-

sidered it as the soul of his house. Caesar wanted to use Varro, who wrote a treatise *De bibliothecis*, to connect world-literature with the world-empire. There is evidence to indicate that he had hoped to transplant the Alexandrian library to the banks of the Tiber, but it was only after his death that the first public library was founded in Rome. Augustus established two collections, one on the Palatine Hill, beside the Temple of Apollo, and another in the portico of Octavia. Of the twenty-eight public libraries in the capital at the beginning of the fourth century, only a small number can be identified. They were divided into Latin and Greek sections, and served at the same time as a depository for public documents.

A collection of books became a necessary part of the appointments of a city palace or a distinguished country estate, even though, as Seneca remarks, the owner hardly read the indexes in the course of his whole life. There were private libraries with as many as 30,000 and even with 60,000 book rolls.

The latest excavations in Ephesus have revealed a bookroom without portico, but instead with a façade and an open stairway ornamented with columns. In order to protect the papyrus rolls from the moisture an outer wall was often added with a narrow corridor between it and the inner wall. The libraries resembled other monumental structures of the period. There was almost always the statue of Apollo or of Minerva in the large hall alcove, together with busts and medallion portraits of scholars and literary men. The book rolls lay in the compartments of the wooden closets, which were often arranged symmetrically and set back into niches in the wall. When necessary, there were several such rows, one on top of the other, the upper ones being reached by means of galleries resting on columns.

Medieval libraries, when contrasted with those of ancient as well as of modern times, are characterized by their comparatively small numbers of books and the limited range of subjects covered. The medieval library catalogs list only a few hundred items at most, and it must be remembered that several titles often form one composite codex. All the literature which the Middle Ages possessed—namely, the Christian writings and the salvaged remains of antiquity—together with the learned and inspirational works which were produced between the ninth and the twelfth centuries, could be readily contained in several hundred volumes. The library at Reichenau had in the ninth century 413 volumes, while that at San Gallo had about 300; St. Emmeran in Ratisbon in the eleventh century had 513; and Cluny in the twelfth

century had 570 volumes. The inventory of the library of the Holy See made in 1295 by Pope Boniface VIII showed it to contain only 500 volumes. It took three centuries for the library of the Benedictine monastery at Bobbio to reach a total of 650 manuscripts.

There have been preserved numerous catalogs of medieval monastic libraries. They show uniformly a triple division of their books into biblical writings, writings of the church fathers, and secular literature.

In the cloister plan of St. Gall (820 A.D.) there is shown a two-story building in the northern outer corner, between the choir house and the nave of the church, accommodating the scriptorium below, and in the upper story the library. In the Benedictine monastery of Fontanella (822-833 A.D.) the library seems to have been accommodated in a building standing apart, somewhat as in the building plan of the Abbot Desiderius for Monte Cassino (1058-1087) and in the monastery at Mt. Athos. In the Cistercian monastery at Clairvaux (1115) the library room is located above the parlatorium; adjoining the cloister there is a small space separated from the sacristy designed for books which are to be read in the cloister itself. Similar arrangements were found in Maulbronn, Zwettl, and Wettingen. The part of the passage adjoining the church served as a reading room. A small working collection of useful texts for ready consultation was kept in the passage itself, either in a niche in the wall or in a small room extending therefrom. In general, the collections of manuscripts belonging to the monasteries were placed where they would be used and were not centralized.

In the smaller monasteries the manuscripts were usually kept in an *armarium* built into the wall; but even in the monasteries which owned larger collections the room in which the cupboards were placed probably did not show any special architectural features. Later, when more room was needed for the growing collection of manuscripts cupboards were placed along the cross-corridor and the monks used the window seats to do their reading. Gradually the part of the corridor adjoining the church was transformed into a room for both reading and book storage.

In the English monasteries the offices of librarian, or *armarius*, or *cantor*, or *precentor*, were combined in one person who was singer, chief librarian, and archivist. He had charge of all the books contained in the *aumbry*, or book cupboard, or later in the bookroom, or library. Cardinal Gasquet says:

Moreover, he had to prepare the ink for the various writers of manuscripts and charters and to procure the necessary parchment for book-making. He had to watch that the books did not suffer from ill use, or misuse, and to see to the mending and binding of them all. As keeper of the bookshelves, the cantor was supposed to know the position and titles of the volumes, and by constant attention to protect them from dust, and injury, from insects, damp, or decay. When they required repair or cleaning, he was to see to it; and also to judge when the binding had to be repaired or renewed. For the purpose of thus renovating the manuscripts under his care, he had, of course, frequently to employ skilled labour. At such times he received an allowance of food for the workmen engaged "on cleaning the bindings of the choir books," etc. Special revenues also were at his disposal "for making new books and keeping up the organs."

The need for public libraries was felt in Italy much earlier than in the north, because of the influence of the Italian mendicant orders and the rise of humanistic studies in Italy. There was consequently developed in Italy what is known as the desk library. Book desks were made both one-sided and two-sided, both high-standing desks and lower ones with a bench before them upon which to sit. The books were laid open and flat upon the desks. The title of the book was written on a strip of parchment or upon a transparent piece of horn, fastened under the front or back cover. The books were sometimes attached to chains, which slid along a horizontal iron pole. When more space was needed there was added a broad shelf over or under the reading desk. When still more space was needed the books were shelved upright, and the number of horizontal shelves increased.

The Renaissance libraries are similar to those of the late Middle Ages, but are more artistic. The more beautiful examples are found today in their original state in Italy. The library hall of the Dominican monastery of San Marco in Florence, erected in 1441 by the order of Cosimo de Medici, was the model of a whole line of Italian libraries, especially for the still completely preserved library of Malatesta Novello in Cesena. Here are found 29 benches on either side of a center aisle. The sloping back of each bench is connected directly with the reading shelf behind it. Under the sloping reading shelf there is a cross-compartment for the placing of manuscripts which are attached to chains. The rods for the rings of the chains run under the reading shelves.

The Laurentian Library in Florence was begun in 1525 but was not opened until 1571, more than a century after the invention of printing. The use of the desk system as installed here is clearly an anachronism.

PLATE I



Ed. Alinari. P. L. N. 1916. FIRENZE - R. Biblioteca Mediceo-Laurenziana-Deliana. Uno dei Plutei dove si conservano i Libri.

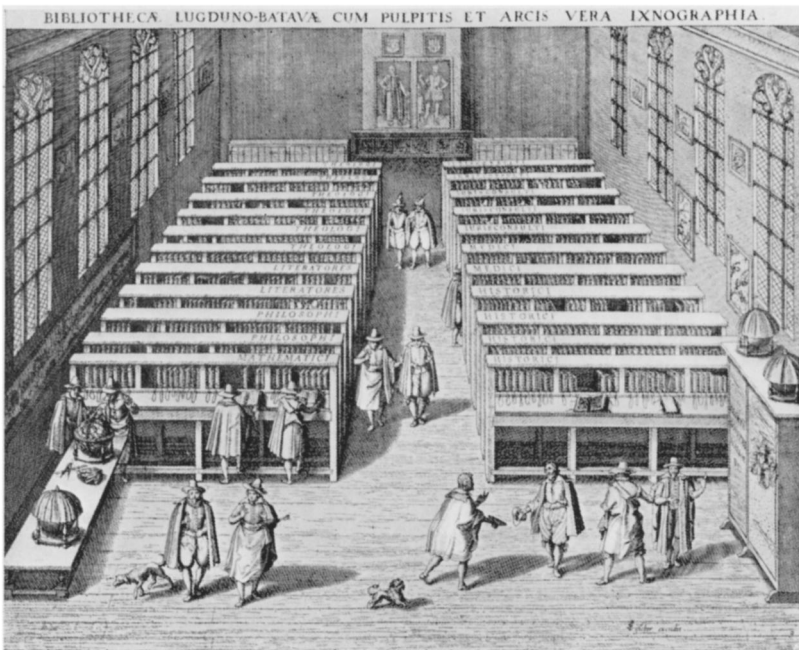
BOOK DESK IN THE LAURENTIAN LIBRARY, FLORENCE

PLATE II



THE LAURENTIAN LIBRARY, AFTER A DRAWING BY ZOCCHI, ENGRAVED BY BARTOLOZZI

PLATE III



THE LIBRARY OF THE UNIVERSITY OF LEYDEN, AFTER A DRAWING
BY JAN CORNELIUS Woudanus

Dr. Leyh considers the library hall of the Biblioteca Ambrosiana in Milan as the most distinguished room ever erected in Italy for the housing of printed books. The book-lined walls are divided horizontally by a narrow wooden gallery, reached by stairs concealed in the four corners. The books are uniformly bound in parchment and carefully grouped according to height. Everything has been subordinated to the general artistic effect of the room as a whole.

The princely libraries of Germany were modeled upon those found in Italy and after the beginning of the eighteenth century in France also. There was a zeal for collecting *objets d'art* as well as books. The circle of interest gradually widened and there arose a desire to make the collections useful to the public. Therein lies the beginning of the national libraries. The most beautiful princely private library of the eighteenth century is still preserved undisturbed in Sans Souci at Potsdam.

The desire to build libraries *de novo* lagged behind the desire to collect, and any old palace, after some few structural changes, was thought adaptable and suitable to receive the collections destined to form the basis of a national library. Thus was the Hotel de Nevers (1721) in Paris remodeled to house the beginnings of the Bibliothèque Nationale, and Montague House (1753) on the northern boundary of London, remodeled for the use of the British Museum. There were no specific demands as to the kind of accommodations needed: a large room or, as a substitute, a row of smaller connected rooms were apparently considered equally suitable for a library.

In Germany the Thirty Years' War and its aftermath had, for almost a century, stifled all creative impulses. With the beginning of the eighteenth century there is noticeable a surprising wealth of artistic production, ushering in one of the richest and most active periods of German architecture. On all sides there arose monastic settlements which are noteworthy for the boldness of their conception. The church and the library, especially, stirred the imagination of the German architects. Here the architect and the patron joined in a common desire for self-expression. The resultant baroque libraries were built not merely as libraries but as settings for noble and costly contents. While the idea of making use of the room as a whole for book walls had originated in Italy, in eighteenth-century Germany fantastic rooms were built around the book. The many colors of the bindings, the shining labels, and the rich gilding were regarded as so much ornamentation to be made use of by the architects. To these architects working in the baroque the book was something with which to cover the

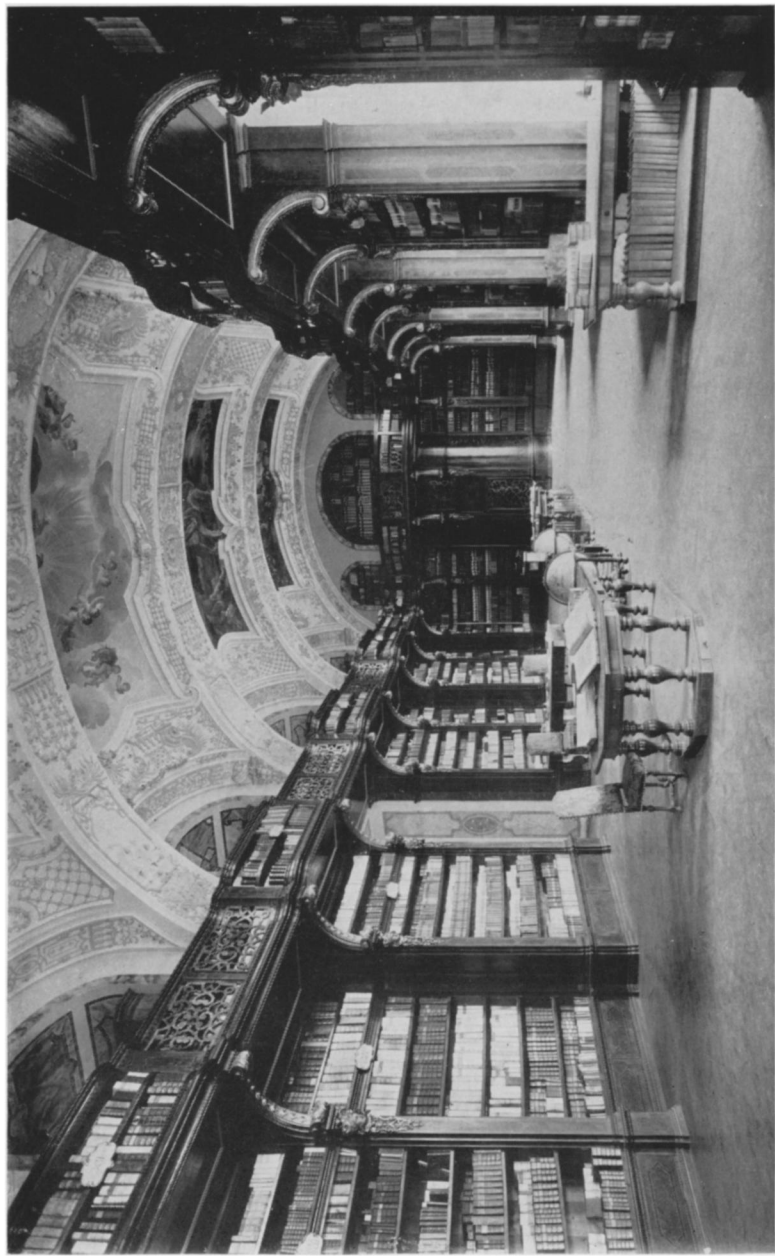
walls. The architects were intoxicated with a passion for color, and they seized upon books as rich material of great ornamental charm with which they could produce an intellectual atmosphere.

Ideas as to what constituted a good-sized working library have greatly enlarged with the broadening of the field of research. In the middle of the seventeenth century Gabriel Naudé considered a library of 50,000 volumes as huge. As late as the year 1800 there were only five libraries in France numbering more than 100,000 volumes each. Libraries grew very slowly in the good old days. The University of Würzburg Library, founded in 1619, had only a total of 11,000 volumes in 1760—which meant an average yearly growth for its first 141 years of only 78 volumes per year; and from 1760 to 1782 the annual accessions averaged only about 60 volumes. In other words, it took that library a century and a half to collect as many books as are acquired by many present-day libraries in a single year. Even as late as the middle of the nineteenth century it was hardly considered necessary to make an exact count of the annual increment to the Prussian State Library, which ordinarily amounted to ten or twelve thousand volumes. Yet contrast the whole number of books, 650,000 volumes, gathered between 1786 and 1890, with the increase of nearly one and a half million volumes between 1890 and 1926. And since 1927 as many as 90,000 volumes have been added in a single year! If this growth is continued for another generation where will room be found for the housing of the books?

In the old libraries, as Dr. Leyh says, it was possible to put the books on parade in a big hall and to treat the rich backs of the bindings as a part of the decoration of the room. But the development of the highly ornamented bookroom into the practical library building of today is due to nothing other than a growing desire to make as complete use as possible of the floor space and the cubic content of a room in which at first only the edges and the wall space were utilized. In order to increase the storage capacity there were added double-faced bookcases, either running parallel with or at right angles to the long walls of the room.

The bookroom of the Munich Library of 1832 carried out, at least theoretically, the suggestions of the architect Wiebeking, who in 1821 had recommended high-ceilinged rooms with galleries and without ladders. In reality there was here but little that could not be found in the Bodleian at Oxford, dating from 1610. However, the rooms of the building were definitely set off for the three fundamental functions

PLATE IV



LIBRARY OF THE CISTERCIAN MONASTERY AT ZWETTL AUSTRIA, DONE IN THE BAROQUE STYLE

PLATE V



LIBRARY OF THE BENEDICTINE MONASTERY AT MELK, AUSTRIA,
DONE IN THE BAROQUE STYLE

of a library: (1) the storage of books; (2) reading rooms; (3) administrative offices and work rooms.

With the continued growth of libraries and the increased demand for more bookshelves it was inevitable that bookcases would be placed at right angles to the walls. The ground floor of the Bibliothèque Ste Geneviève in Paris is a forerunner of the bookstack; but the modern metal stack is traced to the alterations and additions to the British Museum in 1854-56. The stacking of the books was much more effective than had ever been accomplished before, because the distance between the centers of the ranges was reduced from 4.50 meters to six feet (2.44 meters), which more than doubled the storage capacity. Moreover, the shelves were made more easily adjustable by the use of shelf-pins. The stack tiers were made of iron and were only six feet high. The importance of these innovations was not at first recognized in certain quarters. Thus, Edward Edwards, the historian of English libraries, writing in 1859, did not think that the innovations in the British Museum in any way solved the problems of library planning. He considered as the goal high-ceilinged rooms in which it would be possible to see most of the books at a glance and where galleries that give access to the books are reached by circular staircases in the corners (as in the old Astor Library in New York City).

But in the same year, 1859, additions were begun to the Bibliothèque Nationale in Paris, which did much more to develop the idea of a bookstack than the innovations in the library of the British Museum had done. Upon entering the bookroom of the Bibliothèque Nationale, one is immediately impressed by the fact that here is the result of a definite plan, carefully considered and carried out in every detail. Had there been sidelights it would have been a real bookstack; but since the light came entirely from above it was necessary to waste a lot of space in making the central aisle six meters wide and to use grated iron floors in the stack. These two features were religiously copied for decades, even when there was no similar need for them.

In Germany, Petzholdt, the editor of the *Anzeiger für Literatur und Bibliothekswissenschaft*, kept insisting from 1856 on that the most suitable place for bookcases was along the walls of a room and that they should not be placed crosswise except when it is necessary to save space. Even as late as 1877 he recommended the bookrooms of the Munich Library as a model to be copied, oblivious of the fact that that room was antiquated at the very time it was built.

Staelin, the Stuttgart librarian, found it depressing and unattrac-

tive to have the ceiling only two feet above the head and even though on a visit to London and Paris he delighted in the compactness of the bookstacks, nevertheless, he thought that the stack tiers should be eleven or twelve feet high. Dziatsko, on the other hand, considered it unsuitable to have the rows of bookcases close together since he thought it necessary in German libraries to leave space between the bookcases for work tables. Had he only been able to foresee the stack carrels which are now a characteristic feature of the newer American installations!

Dr. Leyh finds a surprising lack of collaboration in the attempts to solve library building problems that arose simultaneously in Greifswald, Halle, and Göttingen. In the matter of lighting the bookstack, Paris should not have served as a model for either Greifswald or Halle, where the light from above, the pierced floors, and the slits in front of the bookcases were quite unnecessary in view of the strong light from the sides. Judging from the great care with which in other respects the building at Halle had been planned, these doubtful ways of providing illumination had come to be looked upon as essential for a bookstack. People were apprehensive about the lower stories of the stack, and as a result this groundless anxiety about lighting crops up in Cologne, Graz, Amsterdam, Leyden, Stockholm, Athens, and elsewhere.

Dr. Leyh traces the history of the decreasing distance between the centers of the ranges (from three meters in Paris to a little over four feet in typical American installations) and adds that it would be a mistake to suppose that every important decrease of this distance has necessarily resulted in the loss of light and of space in the aisles. Shelves were formerly much deeper than was actually necessary. Space was gained by making the shelves shallower, and light was secured by placing the windows more advantageously. Even though the aisles have become narrower, the recently constructed stacks, despite their greater compactness and greatly increased content, are much easier to use and better lighted than the prototype of sixty years ago.

Dr. Leyh rightly argues that use should be made of every source of daylight offered by a modern building of concrete, iron, and glass. He feels that American library architecture, because of subservience to tradition, has a mistaken zeal for monumental buildings, has not yet solved this problem, and that here is an opportunity for further experimentation.

THEODORE W. KOCH